

Please amend the Application as follows.

**AMENDMENTS TO THE CLAIMS:**

The present listing of claims replaces all prior versions, and listings of claims in the application.

1-9. (Canceled)

10. (Currently Amended) A process for preparing tungsten carbide consisting of:

- (a) carburizing a material selected from the group consisting of tungsten powder, tungsten precursor compound powder and combinations thereof, at a temperature ranging from 850° to 950°, and in the presence of a carburizing gas phase,
  - said carburizing gas phase comprising a mixture of CO and CO<sub>2</sub>, said carburizing gas phase having a CO<sub>2</sub> content which is above the Boudouard equilibrium content corresponding to the carburization temperature, and
  - wherein the carburizing step is carried out with a carbon activity ranging from 0.4 to less than 1; and
- (b) heat treating the tungsten carbide formed in step (a) at a temperature ranging from 1,150°C to 1,800°C, and at a carburizing atmosphere sufficient for the carbon content of the tungsten carbide to approach the theoretical, thereby forming tungsten carbide.

11. (Previously Presented) The process of Claim 10, wherein carburizing step (a) is carried out with a carbon activity ranging from 0.4 to 0.9.

12. (Previously Presented) The process of Claim 10, wherein carburizing step (a) is conducted at a temperature of from 900°C to 950°C.

13. (Previously Presented) The process of Claim 10, wherein carburizing step (a) is conducted over a period ranging from 4 to 10 hours.

14. (Previously Presented) The process of Claim 10, wherein the tungsten precursor compound powder is tungsten oxide powder.

15. (Canceled)

16. (New) A process for preparing tungsten carbide consisting of:

- (a) carburizing a material selected from the group consisting of tungsten powder, tungsten precursor compound powder and combinations thereof, at a temperature ranging from 850° to 950°, and in the presence of a carburizing gas phase,

said carburizing gas phase comprising a mixture of CO and CO<sub>2</sub>, said carburizing gas phase having a CO<sub>2</sub> content which is above the Boudouard equilibrium content corresponding to the carburization temperature, and

wherein the carburizing step is carried out with a carbon activity ranging from 0.4 to less than 1; and

- (b) heat treating the tungsten carbide formed in step (a) at a temperature ranging from 1,150°C to 1,800°C, thereby forming tungsten carbide, wherein said tungsten carbide is characterized by a relationship between coherence length  $x$  and lattice strain  $y$  according to Formula (I):

$$y < (-4.06 \cdot 10^{-4} \text{ nm}^{-1} x + 0.113)\%.$$